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INDUSTRIAL DEVELOPMENT COOPERATION AND CONSULTATIONS
(INCLUDING IMPLEMENTATION OF GENERAL ASSEMBLY RESOLUTION 47/153)

Consultations held in 1993 and plan for technical cooperation follow-up activities

Report by the Director-General

Summary

Submits for examination and approval of the Board the conclusions and recommendations of four Consultations held in 1993: on the construction industry, on medicinal and aromatic plants in Asia and the Pacific, on animal feed and related industries in Africa, and on donwstream petrochemical industries. A plan of action for technical cooperation activities as follow-up to the four Consultations is provided in the annex.

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Introduction

1. The present document is submitted to the Board in accordance with General Conference resolution GC.3/Res.2 and specifically paragraph 7, which requests the Director-General to present to the Board the conclusions and recommendations of each Consultation for examination and approval together with a plan for technical cooperation follow-up activities for guidance.

2. It should be noted that the activities covered in this report were carried out in 1993 before the initiation of the UNIDO reform process. These activities thus reflect the programme, structure and priorities prevailing before the restructuring of UNIDO. With the introduction of the new structure and programmes of UNIDO, the System of Consultations has now been reoriented and renamed as Industrial Cooperation and Consultations Service, including Economic and Technical Cooperation among Developing Countries (ECDC/TCDC), and has become an integral part of the Investment and Technology Promotion Division.

3. Its main functions include: (a) identifying opportunities for industrial cooperation between developed and developing countries as well as among developing countries themselves, with due emphasis on investment promotion, technology transfer, human resource development, exchange of information and experience, environmental considerations, ECDC/TCDC and technical cooperation; (b) providing assistance in the formulation and conclusion of cooperation agreements between a wide range of industry-related institutions to establish a basis for viable long-term partnerships; (c) promoting industrial cooperation between regions in different countries involving industrial policy-makers and industry representatives with a view to benefiting from their complementarities in terms of resource endowments, skills and industrial capacities; (d) developing and implementing new concepts, innovative mechanisms and forms of industrial cooperation between developed and developing countries; and (e) establishing advisory groups, bilateral twinning arrangements and/or multilateral networks in specific areas for the purpose of exchanging information and transferring know-how and expertise.

4. With this new orientation and organizational setting, the activities relating to

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"consultations" are currently being directed primarily to serve as a basic support and instrument for the build-up of international industrial cooperation in a direct operational form, involving to a large extent non-governmental entities in developed and developing countries.

I. CONSULTATIONS HELD IN 1993

5. Four Consultations were held in 1993: the First Consultation on the Construction Industry at Tunis, Tunisia, from 3 to 7 May; the Regional Consultation on the Industrial Utilization of Medicinal and Aromatic Plants in Asia and the Pacific in Vienna, Austria, from 5 to 8 July; the Regional Consultation on Animal Feed and Related Industries in Africa in Vienna, Austria, from 5 to 8 October; and the Consultation on Downstream Petrochemical Industries in Developing Countries at Tehran, Islamic Republic of Iran from 7 to 11 November. The reports of the Consultations are contained in documents ID/389, ID/390, ID/393 and ID/394, respectively.

6. Each Consultation attracted a very large number of participants who were directly concerned with the sectors under discussion either as industrialists, policy makers, entrepreneurs, financiers, technology holders and users, equipment manufacturers or representatives of research and development institutions, members of chambers of commerce or industry-related institutions.

7. In particular the related aspects of transfer of technology, investment promotion and economic and technical cooperation among developing countries (ECDC/TCDC) at each Consultation were endorsed. Salient results of the four Consultations are summarized below; the attached plan of action provide greater detail of those results as well as an indication of their follow-up.

First Consultation on the Construction Industry

8. The Consultation was organized jointly by UNIDO and the United Nations Centre for Human Settlements (HABITAT). It was attended by 175 participants from 41 countries and five international and regional organizations. The recommendations agreed on (ID/389, paras. 8-40) covered: sustainable development and environment-friendly construction; information systems; quality, environment and technological development; contributions of professional associations; entrepreneurship and contractual arrangements; training; transfer of technology; basic shelter needs; integrated utilization of non-metallic minerals; design and building materials; economic and technical cooperation.

9. With regard to sustainable development of the construction industry, emphasis was placed on the observed need to establish national mechanisms to facilitate interaction between the main parties of the industry to overcome the institutional fragmentation that prevents a proper formulation of policies and strategies for its coherent development, and to introduce measures to stabilize the various sectoral demands for construction that together make up the highly fluctuating and cyclical nature of the construction market.

10. In relation to environment-friendly sustainable construction, it was recommended that the national science and technology policies should promote the introduction of clean and energy-efficient technologies in the construction industry including building materials manufacturing, and that capacity building in the area of resource management should be given special priority to prevent the transfer of polluting and wasteful technologies and to manage the transfer of low- and non-waste technologies to the best advantage of recipient countries.

11. Acknowledging the need for accurate information on the various aspects of construction activities in different sectors of the economy, it was recommended to establish an information system covering the different sectoral requirements - building materials, equipment and human resources - for the production of buildings and infrastructure works, based on a clear identification of critical areas of demand for housing, buildings and physical infrastructure.

12. Taking into account that quality in construction is closely associated with the level of technological development in a country, the Consultation recommended that countries with a preference for labour-intensive construction methods should pay special attention to appropriate technologies including selective mechanization, proper use of building materials, demonstration schemes and education and training, in order to enhance efficiency and productivity.

13. Appreciating the important role that professional associations play in the construction sector in addition to architectural and engineering design consultancy services, the Consultation recommended that the inputs of these associations should be maximized to help reduce both design and construction time and control construction costs.

14. In relation to training and skill formation as part of an integral human resource development strategy, particular emphasis was placed on sound management practices, including contract management, to achieve efficient scheduling, timely completion and cost control in construction operations.

15. In order to meet the basic needs of the shelterless, the inadequately housed and the economically weaker sections of the population, efforts should be made to increase the production of sustainable and cost-effective building materials and components, preferably based on industrial wastes and agricultural residues, and to develop a decentralized delivery system through setting up centres to manufacture these building materials and components locally.

16. With a view to enhancing resource-management capacity, especially in the least developed countries, and to increasing the range and availability of local building materials, it was recommended that UNIDO should strengthen its programme on the integrated utilization of non-metallic minerals.

17. Recognizing the importance of industrial cooperation among developing countries and between developing and developed countries and that the exchange of information and experience between

them can enhance the adoption of sustainable construction practices in developing countries, the Consultation recommended the development of databases for the construction sector, incorporating energy and environment-related information, to support this process. Regional cooperation in the areas of environmental research, formulation of standards and human resource development was also strongly encouraged.

Regional Consultation on the Industrial Utilization of Medicinal and Aromatic Plants in Asia and the Pacific

18. The Consultation was organized by UNIDO and co-sponsored by the World Health Organization (WHO). It was attended by 75 participants from 32 countries and eight organizations. The Consultation agreed on recommendations (ID/390, para. 8) on: the development of policies on health, agricultural, industrial and trade aspects; agrotechnology, process technology for industrial-scale production, quality assurance and regulatory mechanisms; strengthening of research and development activities; human resource development; and regional and international cooperation for the development of the subsector. It recommended that steps be taken at national, regional and international levels to facilitate the systematic development of medicinal and aromatic plant-based industries.

19. Given the widespread reliance and dependence on plant-based medicines of the majority of populations in developing countries, it was recommended that Governments establish national committees of experts to evaluate the needs and resources of the subsector and to formulate policies, strategies and plans for its development. Particular stress was placed on the formulation of national policies to promote the use of herbal medicine covering, inter alia, introduction of courses in plant-based medicine in educational curricula of health professional and related disciplines, establishment and strengthening of national drug regulatory and registration bodies, and conservation of medicinal and aromatic flora.

20. Taking into account the significance of information, the Consultation recommended the establishment, strengthening and maintenance of national information centres for collection and dissemination of information on technical and trade aspects with the assistance and technical support of United Nations organizations.

21. In relation to the development and transfer of technology, the Consultation recommended that industry in developing countries should initiate schemes to modernize industrial-scale production processes giving due consideration to good manufacturing practices and quality management systems, and enhance technological capabilities by encouraging the setting-up of multipurpose pilot plants for process development and their local fabrication.

22. Acknowledging the importance of international industrial cooperation, it was recommended that industries and research institutes, especially those in developed countries, provide learning and/or training opportunities for technical and managerial personnel of developing countries, and that industries in developed countries be encouraged to undertake joint ventures between developed and developing countries, that international organizations, including UNIDO, assist in the identification and creation of centres of excellence, strengthen this subsector in developing countries, and continue to organize periodic consultations at the regional level, with the next such Consultation to be held in Africa.

23. International organizations were also requested to expand their technical assistance and collaboration programmes in the subsector by introducing modern technologies, new quality assurance systems, updated managerial and technical training, and industrial-scale processing of medicinal and aromatic plants.

24. The Consultation recommended that UNIDO pursue the idea of establishing an advisory body of 10 to 12 independent experts to assist UNIDO in guiding the activities related to the development of the subsector. It also recommended that international organizations such as the World Intellectual Property Organization (WIPO) should collaborate with UNIDO in the development of guidelines on patents, patent rights and intellectual property rights for adaptation in countries in the industrial utilization of medicinal and aromatic plants.

25. Recognizing the importance of collection and dissemination of information, the meeting stressed the need to strengthen the database at the International Trade Centre, UNCTAD/GATT (ITC) in relation to trade in, and markets for, raw materials and high value-added products based on medicinal and aromatic plants.

Regional Consultation on Animal Feed and Related Industries in Africa

26. The Consultation was attended by 54 participants from 36 countries and eight international organizations. The recommendations agreed on (ID/393, paras. 21-30) covered: agro-industrial by-products; feed formulation; quality control; prices and marketing; size of enterprises; equipment; training; UNIDO assistance; government policy; and regional cooperation.

27. With respect to the production of animal feed, it was recommended that priority should be given to the utilization of local raw materials and agro-industrial by-products and residues, on account of its direct impact on food self-sufficiency. Accordingly, research institutes in developed and developing countries should strengthen their activities concerning the location, availability, composition and feed value of ingredients of animal feed such as local raw materials and agro-industrial by-products and residues in African countries.

28. Recognizing the importance of information, it was recommended that a database be built on the nutritive value of these ingredients for use by the animal-feed industry. Such a database could take into account the publication of the Food and Agriculture Organization of the United Nations (FAO) on tropical feeds. Besides, a regional network should be established to enhance the flow of information among African countries regarding local raw materials, agro-industrial by-products and residues.

29. With regard to technology, it was recommended that cost-effective technologies for processing

agro-industrial by-products in suitable ingredients for animal feed production be identified and the information thus obtained be widely disseminated, possibly through the regional network. It was also recommended that UNIDO prepare an information booklet on the types of equipment and machinery required for the production of different animal-feed formulas in order to enable developing countries to select the most suitable equipment and machinery for their specific needs.

Consultation on Downstream Petrochemical Industries in Developing Countries

30. The Consultation was attended by over 140 participants from 29 countries and one international organization. The recommendations of the Consultation (ID/394, para. 19) dealt with the establishment of downstream petrochemical industries; transfer of technology; environment and safety aspects; economic and technical cooperation; promotion of plastics production in Africa; establishment of a technical training centre; establishment of a petrochemical database centre; identification of investment opportunities; quality control and quality assurance centres; and plastics recycling.

31. With regard to the establishment of downstream petrochemical industries, it was agreed that the areas of particular attention should be: market assessment, participation of local entrepreneurs, human resource development and technical training, promotion of applications for finished products, application of quality control and value analysis techniques, environmental protection and safety operations.

32. Transfer of technology should include not only the provision of engineering packages and related equipment but also the means of building up local capacity to assimilate transferred technology, to improve on products and processes, and to participate in the design and construction of petrochemical plants adapted to local conditions.

33. With respect to economic and technical cooperation in the downstream petrochemical industries, emphasis was placed on: regional cooperation to tap the potential of larger markets; facilitating linkages between upstream and downstream petrochemical industries; the exchange of information and experience; and the promotion of transfer of technology, know-how and research and development. Cooperation between industrialized and developing countries could, inter alia, take the following forms: promoting enterprise-to-enterprise cooperation; making technology and expertise available to developing countries; and assisting developing countries, particularly those in Africa, with funds and training materials to meet their human resource development needs.

34. To foster regional cooperation to develop the potential of those markets, and recognizing the importance of assisting Africa in promoting and developing downstream petrochemical products, particularly plastics, the Consultation recommended that UNIDO, inter alia, conduct a market survey for the main petrochemical products in Africa and convene a regional meeting of experts, investigators and managers, to promote the manufacture and application of plastics in Africa.

35. The Consultation also recommended that UNIDO establish a training centre for downstream petrochemical industries financed by contributions from Member States and interested organizations, as well as a petrochemical database centre. UNIDO should also strengthen its ongoing efforts in technical cooperation in the area of plastics recycling.

36. Given that quality control and quality assurance are vital prerequisites for the further optimization of production parameters, the improvement of productivity, cost-effectiveness and development of markets for petrochemical products, countries were urged to acquire or improve capabilities for carrying out quality control and value analysis. Quality control centres should assist industry, especially small-scale industry, in introducing quality assurance.

II. PLAN OF ACTION FOR TECHNICAL COOPERATION ACTIVITIES

37. The UNIDO inter-divisional Advisory Committees for each of the four sectors covered by the Consultations have elaborated plans for follow-up action that identify the target beneficiaries, the follow-up activities required and the lead and supporting units within UNIDO through which those activities might be pursued. The plan of follow-up action is contained in the annex to the present document. They provide the context whereby UNIDO could enhance its technical cooperation and promotional activities.

III. FOLLOW-UP UNDERTAKEN

38. As the search for appropriate opportunities arising from the above-mentioned recommendations of Consultations continues, a few follow-up activities have already been undertaken which are described below.

First Consultation on the Construction Industry

39. A programme concept on the promotion of the construction industry has been prepared that focuses on housing. The concept stresses the synergies between construction, building materials and household equipment and furnishings. Concerning construction, the programme, which will be presented to the United Nations Conference on Human Settlements (Habitat II) in June 1996, emphasizes mainly rural and urban housing in the least developed countries. On building materials, the emphasis is on improving traditional materials, use of recycled materials and more effective use of modern materials. Concerning household equipment and furnishings, work will begin after housing needs have been ascertained.

40. As part of the building materials programme, a workshop on mini cement plant technologies took place at Tianjin, China, from 27 June to 3 July 1994. It yielded agreements for technical cooperation between China and three cement companies: the Mining and Refractories Co. (holding company) and the Amriyah Cement Co., Egypt; Okashana Enterprises PTY, Namibia; and the International Cement Co. Ltd., Nigeria. These agreements amount to nearly $120 million in equipment and technical cooperation and will

involve implementation through UNIDO. Furthermore, other countries (Bolivia, Ghana, Myanmar, Uganda, Viet Nam and Zambia) indicated interest in receiving Chinese technical cooperation and UNIDO services.

Regional Consultation on the Industrial Utilization of Medicinal and Aromatic Plants in Asia and the Pacific

41. A programme concept on the promotion of pharmaceutical, medicinal and aromatic plants was prepared for the development of this industry in Africa and the promotion of interregional cooperation between Asia and Africa. In addition, Gulf Cooperation Council States have expressed interest in obtaining UNIDO assistance in establishing a research centre on medicinal and aromatic plants for Arab States. Active negotiations are under way to organize in India a workshop on the promotion and development of the industrial utilization of medicinal and aromatic plants. The workshop will have a regional focus and the support of interested United Nations organizations such as FAO, WHO and ITC. A similar workshop is planned for the countries of the Preferential Trade Area for Eastern and Southern African States (PTA).

42. Preparatory work for the establishment of an advisory panel on medicinal and aromatic plants was completed. The idea of the advisory panel, to be constituted along the lines of the very successful Leather and Leather Products Industry Panel, received promises of support from two influential manufacturers' associations.

Regional Consultation on Animal Feed and Related Industries in Africa

43. The follow-up to this Consultation has so far centred on the establishment of a database on animal feed ingredients and on the creation of a regional information network on raw materials. Some preliminary discussions have taken place with Kenyan officials as their country has the potential to become a regional focal point for the animal feed industry in Africa. Correspondence has also been exchanged with the African Regional Centre for Technology at Dakar, Senegal, which has expressed willingness to cooperate in the area of by-products processing for animal feed production. The International Atomic Energy Agency (IAEA) has also been contacted to gain access to its database on animal feed literature.

44. The Technology Management Service as well as the Agro-based Industries Branch have included in their work plans a number of projects directly derived from the Consultation's recommendations that deal with cost-effective technologies, equipment and machinery for animal feed production.

Consultation on Downstream Petrochemical Industries in Developing Countries

45. A programme concept was prepared with the aim of promoting the downstream petrochemical processing industries, focusing on the plastics industry as the largest user of petrochemical end-products. To better support synergies within the petrochemical industry and the construction/building materials programme, the proposed regional Consultation on downstream petrochemical industries in Latin America and the Caribbean will focus on plastics for packaging and housing.

IV. ACTION REQUIRED OF THE BOARD

46. The Board is invited to examine and approve the conclusions and recommendations of the Consultations held during 1993, referred to in the present document, and to provide guidance on the plans of follow-up action contained in the annex to the present document.

Annex

PLAN OF FOLLOW-UP ACTION

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Table 4 Consultation on Downstream Petrochemical Industries in Developing Countries 17

Explanatory note

The main features of the recommendations as they appear in the reports of the Consultations (documents ID/389, ID/390, ID/393 and ID/394) have been summarized briefly in the left column of the tables. The main organizations responsible for the follow-up of the recommendations have been listed under the column "Addressed to". Those organizations having a supporting role in technical cooperation have also been indicated. In the last column, entitled "In-house responsibility", the units in the UNIDO Secretariat having main responsibility for initiation of activities have been designated. It is to be understood that the proposed programmes and projects would be carried out subject to availability of funds and, in the case of technical cooperation, receipt of an official request of the Government.

Abbreviations

ARCT	African Regional Centre for Technology
CSPD	Country Strategy and Programme Development Division
CSPD/AFR	Africa Programme
CSPD/ARAB	Arab Countries Programme
CSPD/AP	Asia and the Pacific Programme
CSPD/EUR	Europe Programme
CSPD/LAC	Latin America and the Caribbean Programme
ECDC/TCDC	economic and technical cooperation among developing countries
FAO	Food and Agriculture Organization of the United Nations
FMD	Funds Mobilization Division
FMD/PF	Programme and Project Funding
GATT	General Agreement on Tariffs and Trade
Habitat	United Nations Centre for Human Settlements
HED	Human Resource and Enterprise Division
HED/HRD	Human Resource Development Branch
HED/EDR	Enterprise Development and Restructuring Branch
HED/SME	Small and Medium Enterprises Branch
HED/ISP	Institutional Support and Private Sector Development Branch
ILCA	International Livestock Centre for Africa
ILO	International Labour Organisation
IRD	Information and Research Division
IRD/INF	Industrial Information Section
IRD/STAT	Industrial Statistics Branch
IRD/RES	Studies and Research Branch
ISED	Industrial Sectors and Environment Division
ISED/AGRO	Agro-based Industries Branch
ISED/CHEM	Chemical Industries Branch
ISED/ENV	Environment and Energy Branch
ISO	International Standards Organization
ITC	International Trade Centre UNCTAD/GATT
ITPD	Investment and Technology Promotion Division
ITPD/IS	Investment Services
ITPD/IS/IP	Investment Promotion Programme
IPTD/TMS	Technology Management Service
ITPD/TMS/TDS	Technology Development Section
ITPD/ICC	Industrial Cooperation and Consultations Service, including ECDC/TCDC
ITTO	International Tropical Timber Organization
LDC	Least developed country
NGO	Non-governmental organization
R and D	Research and development
TFAP	Tropical Forestry Action Programme
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

Table 1

FIRST CONSULTATION ON THE CONSTRUCTION INDUSTRY
(Tunis, Tunisia, 3-7 May 1993)

Issue I: Prospects for development of the construction industry in the developing countries

Issue II: Promoting sustainable construction industry activities

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
Prospects for development of the construction industry in the developing countries			
1. Adjustment of the construction industry to current liberalization measures and changing economic and industrial scenarios in order to improve growth potential and cost-effectiveness and attracting investment opportunities in the industry	Governments, international institutions, i.e. World Bank, UNCTAD, GATT, local financing institutions	Identification of country needs and creation of favourable policy environment relating to investment; assessment of trade restrictions, tariff reforms and fiscal incentives for the construction industry	Lead unit: ITPD/IS/IP Support units: CSPD ISED/CHEM
2. Introduction of measures to stabilize the various sectoral demands for construction to cope with the highly cyclical nature of the construction market and to protect small contractors	Governments, UNIDO, Habitat, local professional associations, producers, contractors, investors	Survey and analysis of demands, available resources, building materials, production trends for a balanced distribution of construction market-sharing and allocation of contracts	Lead unit: ITPD/ICC Support units: ISED/CHEM CSPD
3. Promotion of capacity-building programmes and creation of appropriate instruments, including legislative support for the contracting process for entrepreneurship development; encouragement of partnership through joint ventures between domestic and foreign firms	Governments, UNIDO, ILO, professional institutions	Identification and selection of areas for joint-venture activities; creation of more favourable business relationships for local consultants and contractors with their foreign counterparts	Lead units: ISED/CHEM HED/HRD ITDP/IS/IP Support unit: CSPD
4. Establishment of an innovative public policy framework conducive to better access to credit and finance for contractors, small- and medium-scale entrepreneurs; the strengthening of the financial base of the construction industry	Governments, financing institutions	Review of existing mechanisms, resource allocation, loan policies; selection of priority subsectors	Lead unit: ISED/CHEM Support unit: CSPD

Table 1 (continued)

	RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
	Main features	Addressed to	Action required	In-house responsibility
5.	Formulation and promotion of energy conservation measures and selection of technologies in the production of building materials, construction process and use of buildings	Governments, professional technical centres, universities, R and D institutions, producers of building materials including contractors	Preparation of guidelines and specifications for planners, professionals, designers and producers as well as end-users	Lead units: ISED/CHEM ITPD/TMS/TDU Support unit: ITPD/ICC
6.	Establishment of a national support mechanism for coordinating better interaction between the main actors in the construction industry and promoting/ monitoring its development in an integrated manner	Governments, UNIDO, Habitat, local professional associations, R and D institutions, universities, investors, entrepreneurs including producers/suppliers of building materials	Preparation of policy guidelines based on country conditions and resources; establishment of priorities and modalities for promoting the industry within feasible local objectives	Lead unit: ITPD/ICC Support units: ISED/CHEM CSPD ITPD/TMS/TDU
7.	Reinforcement of linkages between R and D, specialized institutions and field operations in order to increase performance in e.g. technology innovation, quality and safety in addition to the rehabilitation of building stock in disaster-prone areas	Governments, UNIDO, Habitat, professional associations, R and D institutions, contractors, building materials manufacturers	(a) Identification of corrective measures in addition to monitoring activities through appropriate institutional mechanisms (b) Definition of complementary measures through appropriate design and specification guidelines and preparation of manuals	Lead units: ITPD/ICC ISED/CHEM Support unit: CSPD
8.	Setting up databases and information system for forward-planning and forecasting process to help meet the demand for housing, buildings and infrastructure works	Governments, international institutions, UNIDO, Habitat and local professional associations and institutions	Survey and assessment of economic and construction trends; establishment of priorities and objectives of construction programmes including housing	Lead units: ITPD/ICC IRD/STAT IRD/INF Support units: CSPD ISED/CHEM
9.	Transfer, application and dissemination of technology supported by policy and institutional frameworks in order to increase overall efficiency and delivery systems and reinforce local capability and competitiveness of the local construction industry	UNIDO, Habitat and other international organizations	Identification of technology packages; assistance in training; creation of information networks for sharing of experience and expertise among developed and developing countries	Lead units: ISED/CHEM HED/HRD IRD/INF Support unit: CSPD

Table 1 (continued)

	RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
	Main features	Addressed to	Action required	In-house responsibility
10.	Policy guidelines for the integration of both maintenance and rehabilitation in cost analysis; estimating and contracting of new construction works including maintenance of existing housing stocks and infrastructures	Governments, professionals, contractors and quantity surveyors	Implementation of measures and monitoring of tendering process	Lead units: ITPD/ICC ISED/CHEM Support unit: CSPD
11.	Promotion of proper use of building materials, appropriate technology, selective mechanization in addition to education/ training to enhance efficiency and productivity in the industry	Governments, UNIDO Habitat, ILO, regional institutions	Setting up national/regional demonstration/ training centres in developing countries; adaptation of appropriate technology and improving labour-intensive techniques	Lead units: ISED/CHEM HED/HRD Support unit: ITPD/ICC
12.	Establishment of national consensus on quality levels for building materials among all the actors including end-users in addition to cost-effective technological option to ensure durability and longer life expectancy of building/structures through performance appraisal and validation mechanisms	National and regional standards organizations, ISO and other international organizations	(a) Review and upgrade of existing building codes and formulation of appropriate quality standards (b) Selection of viable technologies suited to local conditions	Lead units: ITPD/ICC ISED/CHEM Support unit: CSPD
13.	Strengthening and promoting coordinated action and maximize the inputs of professional associations and consultancy services for efficient scheduling of design/construction completion, cost control and improving management practices for better performance of the industry	Governments, UNIDO, Habitat, ILO, R and D institutions, professionals, contractors and building material producers	Appropriate application of construction technology, cost control, tendering and construction management techniques in public and private projects and training at all levels, i.e. professional, managerial and technical	Lead units: ITPD/ICC HED/HRD Support unit: ISED/CHEM
	Promoting sustainable construction industry activities			
14.	Country-specific measures with due regard to priorities and resources for long-term benefits for sustainable construction activities	Governments, international/regional organizations, professional associations	Assessment of resources; formulation of short-, medium- and long-term development policies; setting up clear objectives for the industry	Lead unit: ISED/CHEM Support unit: ITPD/ICC
15.	Promotion of land-use reforms and land management practices including mandatory impact assessment for construction and mining activities on the environment	Governments, Habitat, UNEP, FAO	Formulation of measures and creation of mechanisms including legislative and technical guidelines relating to land-use control	Lead unit: ISED/ENV Support units: ITPD/ICC ISED/CHEM

Table 1 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
16. Provisions for sustainable activities of the construction industry in the development planning process with priority to capacity-building in resource management and encouragement of women in the construction industry	Governments, international/regional organizations and training institutions	Setting up feasible objectives and training programmes for the main actors including professionals, women and policy-makers	Lead units: HED/HRD ITPD/ICC Support units: ISED/CHEM CSPD
17. Building up environmental awareness through school and university curricula and advisory bodies, e.g. environmental protection councils, including in-service training	Governments, UNESCO, R and D institutions, universities and training bodies	Country-specific identification of priority research areas	Lead units: ISED/ENV HED/HRD Support units: ITPD/ICC CSPD IRD/INF
18. Promotion of cooperation among developing countries on environmental issues in construction [and supportive action with NGOs to sensitize those countries]	Governments, international/regional organizations, NGOs, professional associations	Formulation/implementation of awareness programmes among developing countries and between industrialized and developing countries	Lead units: ISED/CHEM ITPD/ICC Support unit: ISED/ENV
19. Promotion of and incentives for the use of low-energy and efficient high-energy materials as well as environment-friendly technologies	Governments, UNIDO, Habitat, R and D institutions and professionals	Formulation of policies; identification and selection of appropriate environment-friendly technologies, research and modernization programmes	Lead units: ISED/CHEM ITPD/TMS/TDU Support unit: ITPD/ICC
20. Introduction of energy audits, efficient design and labour-intensive energy-saving construction techniques	Governments, UNIDO Habitat, R and D institutions and professionals	Application of energy-saving measures in design and use of buildings	Lead units: ISED/CHEM ITPD/TMS/TDU Support unit: ITPD/ICC
21. Encouraging research efforts in the development of building materials including recycling of wastes relating to management of non-renewable resources	Governments, UNEP, UNIDO, FAO, Habitat, R and D institutions as well as ITTO and TFAP	(a) Identification of country-specific priority research areas for building materials (b) Identification of the role of fast-growing trees and preservation of secondary species of timber	Lead units: ISED/CHEM ISED/ENV Support units: ITPD/ICC CSPD
22. Indigenous capacity-building for preventing the transfer of polluting and wasteful technologies to developing countries and use of funding mechanisms, i.e. Global Environment Facility, for pollution abatement in the construction industry	Governments, UNIDO, Habitat, UNEP	Training programmes for professionals and technicians including reinforcement of research capabilities	Lead units: ITPD/TMS/TDU HED/HRD Support units: ISED/ENV ISED/CHEM

Table 1 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES		
Main features	Addressed to	Action required	In-house responsibility	
. Developing and strengthening database systems incorporating energy-/environment-related information to support exchange of data and experience between industrialized and developing countries	Governments, UNIDO, UNEP and other international organizations and regional institutions	Setting up information networks and diffusion of related publishing materials	Lead units: Support unit:	ITPD/TMS/TDU ISED/ENV IRD/INF ISED/CHEM
. Encouraging regional cooperation in environmental research, formulation of standards and human resource development in addition to promoting international efforts by UNIDO and Habitat for sustainable construction practices	Governments, international organizations, research institutions, training bodies	Identification of areas for regional/international cooperation in R and D, codes/standards practices and training of managers, professionals and technicians	Lead units: Support units:	HED/HRD ISED/CHEM ISED/ENV ITPD/ICC CSPD
. Promotion of locally-produced building materials and inclusion of low-energy/environmentally sound materials in contract specifications	Governments, UNIDO, Habitat, professionals and contractors	Setting up guidelines, specifications and appropriate technological application in construction projects	Lead unit: Support unit:	ISED/CHEM ITPD/ICC
. Strengthening UNIDO's programme on integrated utilization of non-metallic minerals to broaden the range of local building materials, especially in LDCs	Governments, UNIDO, Habitat and other international/regional organizations	Inventory of local resources including non-metallic minerals, analysis of consumption of non-renewable resources; formulation of policies and viable programmes for the least developed countries	Lead units: Support unit:	ISED/CHEM CSPD ITPD/ICC

Table 2

REGIONAL CONSULTATION ON THE INDUSTRIAL UTILIZATION OF MEDICINAL AND AROMATIC PLANTS IN ASIA AND THE PACIFIC
(Vienna, Austria, 5-8 July 1993)

Issue: Integrated development of industrial utilization of medicinal and aromatic plants in countries of Asia and the Pacific region

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
1. Establishment of national committees comprising experts from industry, agriculture, health and commerce, and research institutions, to evaluate the needs and resources of the subsector and to formulate policies, strategies and plans for its development	Governments, international organizations (UNIDO, WHO)	(a) Dissemination of Consultation report (b) Advice/assistance on request	Lead unit: ITPD/ICC Support units: CSPD/AFR, AP,EUR,LAC ISED/CHEM
2. Formulation of national policies for the development of the subsector covering aspects such as: (a) Promotion of use of herbal medicines, their incorporation in national health delivery systems, and also achieving import substitution (b) Introduction of courses on plant-based medicine in the educational curricula of health professionals and related disciplines (c) Establishment/strengthening of national drug regulatory and registration bodies (d) Conservation of medicinal/aromatic flora	Governments, professional associations and educational institutions, international organizations (WHO, UNIDO, FAO)	(a) Dissemination of information/report (b) Advice/assistance on request on policies related to the promotion of rational use of herbal medicine, education of health professionals, as well as on drug, regulatory and registration bodies, and viable policies and programmes for the cultivation and conservation of plants (c) Sensitizing WHO and FAO for cooperation	Lead unit: ITPD/ICC Support units: CSPD/AFR, AP,EUR,LAC ISED/CHEM
3. Establishment/strengthening of a national information centre for the collection and dissemination of information on technical and trade aspects with the assistance of United Nations bodies, including its maintenance through technical support of these organizations	Governments, institutions, companies, international organizations such as UNIDO, UNESCO and ITC	(a) Assessment of information requirements, identification of practical modalities (b) Review of existing information networks (c) Sensitizing UNESCO and ITC for cooperation	Lead unit: IRD/INF Support units: ITPD/ICC ISED/CHEM

Table 2 (continued)

	RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
	Main features	Addressed to	Action required	In-house responsibility
4.	Promotion of learning/training opportunities for technical and managerial personnel from developing countries in industrialized countries	Governments, companies, associations	(a) Development of technical assistance, human resource development (b) Symposia and training programmes for policy makers, professionals and technicians	Lead unit: HED/HRD Support units: ITPD/ICC ISED/CHEM
5.	Creation of appropriate instruments for entrepreneurship development and encouragement of partnerships through joint ventures between local and foreign enterprises	Governments, companies, manufacturers' and trade associations	Strengthening of industrial associations' capabilities; elaboration of scheme for sharing of experience among developing as well as between developing and developed countries	Lead unit: ITPD/IS Support units: HED/ISP ITPD/ICC
6.	Initiation of schemes to modernize industrial-scale production processes for plant-based medicaments, aroma chemicals and essential oils, giving due consideration to good manufacturing processes and quality management systems	Companies, manufacturers' associations, international organizations	(a) Liberalization of policies and incentives for the development of small-scale industries for phytoproducts (b) Development of technical cooperation programmes to support modernization schemes for strengthening capabilities of industrial associations and units	Lead units: ISED/CHEM ITPD/ICC Support units: CSPD/AFR, AP,EUR,LAC
7.	Enhancement of technological capabilities through setting up multi-purpose plants for process development and initiation of steps to locally fabricate such plants, taking due advantage of design prepared by UNIDO	Governments, manufacturers' associations, UNIDO	Identification of technology needs; provision of assistance in fabrication; and establishment of multi-purpose processing plants	Lead units: CSPD/AFR, AP,EUR,LAC ISED/CHEM Support units: ITPD/ICC ITPD/TMS/TDU
8.	Enhancement of efforts by relevant international bodies through technical assistance and collaboration programmes in all major fields of activities in the subsector covering transfer and application of technology supported by policy and institutional frameworks to increase overall efficiency; identification and creation of centres of excellence	Governments, technical institutions, international organizations (UNIDO, WHO, UNESCO, FAO)	(a) Development of expanded programmes for technical assistance by the international organizations (b) Assessment and use of capabilities of centres under the aegis of international organizations (c) Sensitizing WHO, UNESCO and FAO for cooperation	Lead unit: ISED/CHEM Support units: ITPD/ICC ITPD/TMS/TDU

Table 2 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
9. Strengthening and promoting coordinated action for the development of manpower, research and development; organizing periodic Consultation meetings on the subsector at the regional level; proposal for another such meeting with focus on Africa	Governments, R and D and human resource development institutions, international organizations such as UNIDO, WHO and ILO, and regional organizations	(a) Assessment of country-specific requirements in the area of human resource development and R and D (b) Steps to facilitate commercialization of technologies developed by research and development institutions (c) Survey and assessment of potentials and constraints, organization of training courses on a variety of topics, plan for convening a Consultation meeting with focus on Africa (d) Sensitizing WHO and ILO for cooperation	Lead unit: ITPD/ICC Support units: HED/HRD ISED/CHEM
10. Pursuing coordinated progammes of converting raw materials into processed and semi-processed products for local use and export	Companies, Governments, international organizations such as UNIDO, WHO and ITC	(a) Formulation of requests for technical assistance, designing of programme to assist the development of the subsector (b) Rational use of resources (raw materials, finances, technical skills) for increased cooperation in processing, testing, trade and import substitution and export earning possibilities, etc. (c) Sensitizing WHO and ITC for cooperation	Lead unit: ISED/CHEM Support units: CSPD/AFR, AP,EUR,LAC ITPD/IS/IP ITPD/ICC

Table 3

REGIONAL CONSULTATION ON ANIMAL FEED AND RELATED INDUSTRIES IN AFRICA
(Vienna, Austria, 5-8 October 1993)

Issue I: Promotion of the use of local agricultural and industrial raw materials, by-products and wastes, including research and information on the composition, modalities of utilization and processing requirements as well as quality control and the development of regional cooperation

Issue II: Promotion of small- and medium-scale enterprises with special emphasis on appropriate technologies, training and regional cooperation

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES		
Main features	Addressed to	Action required	In-house responsibility	
1. Enhance utilization of local raw materials, agro-industrial by-products and residues	Governments, UNIDO, FAO	Assistance and advice on request	Lead unit: Support units:	ISED/AGRO ITPD/ICC ITPD/IS ITPD/TMS
2. Establish a regional information network on local raw materials, agro-industrial by-products and residues	Regional organizations, UNIDO, FAO	Assistance to regional organizations such as ILCA, ARCT	Lead unit: Support units:	ITPD/ICC ISED/AGRO ITPD/TMS IRD/INF
3. Explore possibilities of attaching animal feed-producing units to agro-industrial production plants	Governments, UNIDO, FAO	Assistance and advice on request	Lead unit: Support units:	ISED/AGRO ITPD/ICC ITPD/IS ITPD/TMS
4. Strengthen research activities on location, availability, composition and feed value of local raw materials, agro-industrial by-products and residues [as well as on quality control]	Research institutes, UNIDO, FAO	Database on animal feed ingredients and cooperation between research institutes and industry	Lead unit: Support units:	ISED/AGRO ITPD/ICC ITPD/TMS IRD/INF
5. Identify cost-effective technologies for processing suitable animal feed ingredients	Technology institutions, UNIDO	Dissemination of information	Lead unit: Support units:	ITPD/TMS ISED/AGRO ITPD/ICC
6. Provide advice in the choice of appropriate technologies, equipment and tool manufacture	UNIDO	Assistance and advice within ECDC/TCDC	Lead unit: Support units:	ITPD/TMS ISED/AGRO ITPD/ICC
7. Prepare an information booklet on equipment and machinery for the production of different animal feed compositions	UNIDO	Preparation of booklet and dissemination of information	Lead unit: Support unit:	ISED/AGRO ITPD/ICC
8. Identify suitable projects and sources of financing; advise in negotiations	Donor Governments, UNIDO	Assistance and advice on request	Lead unit: Support units:	CSPD/AFR ISED/AGRO ITPD/ICC FMD/PF

Table 3 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
9. Establish quality control services for small-scale producers	Research institutions, UNIDO	Assistance and advice on request	Lead unit: ISED/AGRO Support unit: ITPD/ICC
10. Expand training facilities for training in animal feed production	Training institutions, UNIDO	Assistance and advice on request	Lead unit: HED/HRD Support units: ISED/AGRO ITPD/ICC
11. Formulate appropriate policies to promote efficient production and utilization of animal feed	Governments, UNIDO	Assistance and advice on request	Lead unit: ITPD/ICC Support units: ISED/AGRO ITPD/IS CSPD/AFR

Table 4

CONSULTATION ON DOWNSTREAM PETROCHEMICAL INDUSTRIES IN DEVELOPING COUNTRIES
(Teheran, Islamic Republic of Iran, 7-11 November 1993)

Issue: (a) Manufacturing and application technologies of downstream petrochemical industries;
(b) Marketing of, and market development for, petrochemicals

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
1. In establishing downstream petrochemical industries, developing countries should consider the necessary conditions for success and viability of such projects, paying particular attention to the following areas: (a) Assessment of markets with strong emphasis on domestic outlets (b) Participation of local entrepreneurs (c) Human resource development and technical training (d) Promotion of applications for finished products (e) Quality control and quality assurance, including after-sales services as well as value analysis techniques (f) Environmental protection and safety of operations	Governments, development finance institutions, international organizations (UNIDO, UNDP), manufacturers' and professional associations, chambers of industry and commerce, public and private sector companies, consultancy and engineering companies	(a) Dissemination of Consultation report	Lead unit: ITPD/ICC
		(b) Advice/assistance on request	Lead units: CSPD, ISED/CHEM Support unit: ITPD/ICC
		(c) Assessment of technological suitability and commerial viability of industrial projects in downstream petrochemical industries	
		(d) Strengthening of industrial associations' capabilities	
		(e) Exchange of experience and know-how between enterprises	Lead unit: HED/SME Support unit: ITPD/ICC
		(f) Sensitizing multilateral development institutions to the relevance of these recommendations for the development of the sector	Lead unit: ITPD/ICC
		(g) Incorporation into UNIDO sectoral development policies for petrochemicals	Lead units: CSPD, ISED/CHEM Support unit: ITPD/ICC
		(h) Securing of appropriate opportunities for technical training of operators and plant managers	Lead units: HED/HRD, HED/EDR Support unit: ITPD/ICC
		(i) Incorporation of environmental and safety considerations as an integral component in project feasibility and appraisal	Lead unit: ISED/ENV Support unit: ITPD/ICC
2. Effective transfer of technology should include not only the provision of engineering packages and related equipment but also the means of building up local capacity to assimilate transferred technology and to improve on products and processes	Governments, companies, manufacturers' associations, international organizations	(a) Identification of prerequisites for local assimilation of technology	Lead unit: ITPD/TMS Support unit: ITPD/ICC
		(b) Adequate provision for training in technology transfer negotiations and agreement to enable local assimilation of technology	

Table 4 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
3. Due regard should be paid to the development of local capability to participate in plant design and undertake construction. Technical standards and specifications for the design and erection of plants should be adapted to local conditions without relaxing safety and environmental requirements or reducing operational efficiency	Entrepreneurs, research and development centres, Governments, international organizations, consultancy and engineering companies	(a) Consideration of these requirements at negotiations for technology transfer and related agreements (b) Strengthening of the capabilities of national and regional technical training and R and D centres in process industries (c) Linked to recommendation No. 2 above	Lead unit: ITPD/TMS Support units: ITPD/ICC ITPD/IS HED/HRD
4. At the initial stages of setting up these industries, some developing countries could focus on relatively practical steps such as the development of new compounding technologies and the modification of plastics and other products to increase value added	Governments, companies, particularly small- and medium-scale enterprises	(a) Establishment of commercial viability and technical feasibility of incipient projects based on local needs (b) Promotion of and technical assistance for the establishment of small- and medium-scale enterprises in the sector	Lead units: HED/SME IRD/RES Support unit: ITPD/ICC
5. The petrochemical industry should adopt the best prevailing practices in regard to environmental protection and internationally accepted practices in matters related to safety of the work place	Companies, official regulatory bodies, international organizations (UNEP, WHO, ILO, UNIDO)	(a) Provision of up-dated information on best prevailing practices in regard to environmental protection and safety (b) Linked to recommendation No. 1(f) above	Lead unit: ISED/ENV Support units: HED/ISP ITPD/ICC
6. Economic and technical cooperation should be promoted among developing countries in the downstream petrochemical industries, particularly with a view to: (a) Furthering regional cooperation to tap the potential of larger markets (b) Facilitating the development and/or expansion of linkages between upstream and downstream petrochemical industries (c) Pooling resources, particularly through the exchange of information and experience (d) Promoting transfer of technology, know-how and research and development	Governments, public and private sector companies, international organizations	(a) Assessment of corporate complementarities in respect to raw material endowment, market, techology, industrial experience and know-how (b) Establishment of national and regional product development centres for key downstream product groups such as plastics and fibres (c) Organization of technical seminars and symposia to facilitate the attainment of the objectives	Lead units: ITPD/ICC Lead unit: CSPD/PSM/GI Support unit: ITPD/ICC

Table 4 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
Main features	Addressed to	Action required	In-house responsibility
7. In order to do so, particularly in the context of Africa, UNIDO should conduct a demand/supply market survey for the main petrochemical products	UNIDO	(a) Regional/subregional market survey on demand/supply databases for selected petrochemical product groups (b) Dissemination of information on petrochemicals contained in UNIDO directory	Lead unit: ITPD/ICC Support unit: IRD/RES
8. Cooperation between industrialized and developing countries could, inter alia, take the following forms: (a) Promoting enterprise-to-enterprise cooperation (b) Making technology and expertise available to developing countries under competitive market conditions	Governments, companies, international organizations, technology holders, consultancy and engineering companies	(a) Identification of technology needs (b) Development of technical assistance	Lead unit: ITPD/TMS Support unit: ITPD/ICC Lead unit: CSPD Support unit: ITPD/ICC
(c) Bilateral/multilateral cooperation to strengthen existing national and regional technical development centres	Governments, multilateral agencies, international organizations including UNIDO	Linked to recommendations No. 4 and No. 14	Lead unit: ISED/CHEM Support unit: ITPD/TMS
(d) Assisting developing countries, particularly those in Africa, with funds and training materials to meet their human resource development needs	Governments, regional and international development finance institutions, international agencies including UNIDO and ILO	(a) Assistance/advice on request (b) Preparation of proposals and opportunities for human resource development on regional/country basis	Lead unit: HED/HRD Support unit: ITPD/ICC
9. To provide a filip to such cooperation, a technical training centre for downstream petrochemical industries should be established by UNIDO through financial contribution from Member States and interested organizations. Already existing centres should be upgraded in terms of equipment and faculty experience through such cooperation	UNIDO, Governments, international organizations	(a) Strengthening of existing research and development centres and technical training institutions in the petrochemical sector (b) Securing additional training opportunities with operating companies in both industrialized and developing countries (c) Linked to recommendation No. 8(d)	Lead units: HED/HRD HED/EDR Support unit: ITPD/ICC
10. UNIDO current joint activity programmes in the field of petrochemicals should be encouraged and extended to other interested parties	UNIDO	Consolidation and expansion of current bilateral and multilateral activities in the petrochemical sector	Lead unit: ISED/CHEM Support unit: ITPD/ICC

Table 4 (continued)

RECOMMENDATIONS		FOLLOW-UP ACTIVITIES		
Main features	Addressed to	Action required	In-house responsibility	
11. Expert group meetings on specific products should be held in those countries that have valuable experience to share. In that context, UNIDO should convene a regional meeting of experts, investors and managers, possibly in Africa, to promote the manufacture and application of plastics	Public/private companies in the petrochemical sector, government agencies, UNIDO and other regional and international organizations	(a) Assistance/advice on request	Lead unit:	ITPD/ICC
		(b) Convening of a regional expert group meeting to share experience and know-how in the manufacture and application of plastics	Lead unit:	ITPD/ICC
		(c) Dissemination of available information on the topic to interested partics	Lead unit: Support unit:	ISED/CHEM ITPD/ICC
12. UNIDO should establish a petrochemical database centre to serve as a tool for information collection and dissemination and to provide help to petrochemical enterprises in marketing, technology transfer, environmental impact assessment, safety hazards and feasibility studies including regional availability of process technologies, machinery and technical manpower	UNIDO	Dissemination of information combined in UNIDO petrochemicals database to relevant entities in the developing countries	Lead unit: Support unit:	IRD/INF ITPD/ICC
13. To ensure the effectiveness of investment promotion, it is important that both Member States and UNIDO undertake adequate preparatory activities, including the identification of investment opportunities by the preparation of profiles of downstream petrochemical production plants	Governments, public/private enterprises, chambers of industry and commerce, international organizations including UNIDO	Identification and formulation of investment opportunities translated into concrete petrochemical projects	Lead unit: Support units:	ISED/CHEM ITPD/IS ITPD/ICC
14. Quality control and quality assurance are vital prerequisites for further optimization of production parameters, improvement of productivity, cost-effectiveness and development of markets, particularly for performance products and export of products. Consequently, countries should acquire or improve capabilities for carrying out quality control and value analysis. Quality control centres should then assist industry, especially small-scale industry, in introducing quality assurance. These centres should preferably be organized and supported by the industry	Public/private sector enterprises in the petrochemcial sector, government agencies, manufacturers' associations, development finance institutions, regional and international organizations including UNIDO	(a) Preparation and dissemination of guidelines on quality control and quality assurance	Lead unit: Support unit:	ISED/CHEM ITPD/ICC
		(b) Incorporation of these concepts into the sectoral policies for the development of downstream petrochemical industries		
		(c) Linked to recommendation No. 4	Lead units: Support unit:	MED/SME IRD/RES ITPD/ICC

Table 4 (continued)

	RECOMMENDATIONS		FOLLOW-UP ACTIVITIES	
	Main features	Addressed to	Action required	In-house responsibility
15.	With regard to plastic recycling, UNIDO should strengthen its ongoing efforts to implement technical cooperation projects in this area, offering the most appropriate technology in the field to developing countries, taking into account such factors as their physical environment, pattern of usage, employment generation, market structure and purchasing power. UNIDO should, when necessary or requested, undertake efforts with a view to increasing the awareness of developing countries about the state-of-the-art technologies in this context	UNIDO	(a) Assessment of recycling needs of plastics in developing countries (b) Identification of practical modalities for plastic recycling based on both state-of-the-art technologies and conventional processes (c) Securing the inputs and cooperation of the Association of Petrochemicals Producers in Europe	Lead unit: ISED/CHEM Support units: ISED/ENV ITPD/TMS ITPD/ICC